

Abstract

Title: Application of backstroke to a patient with ankylosing spondylitis

Objectives: To evaluate the effectiveness of the application of backstroke with chosen parameters to a patient with ankylosing spondylitis. To compare the effectiveness of this swimming exercise programme with a traditional exercise programme held in a gymnasium. This work investigates whether it is suitable to recommend backstroke swimming to patients with ankylosing spondylitis as an effective form of physical exercise for improving range of movements and reducing pain.

Methods: The effectiveness of a 9 week long swimming programme was evaluated using a range of movements of the glenohumeral and coxal joints and of the spine. The presence of pain was measured by the Bath Ankylosing Spondylitis Disease Activity Index. The same parameters were measured for another patient with the similar activity of the disease who took part in group exercises in a gymnasium. At the end of the programmes the parameters were compared and evaluated.

Results: The swimming programme has improved the patient's posture and has strengthened back muscles. Pain was reduced in some parts of the back and also general pain measured by BASDAI. The range of movements of both glenohumeral joints improved in all measured directions. The range of movements of coxal joints improved in most measured directions. The mobility parameters of the spine improved by 0.5–1.5 cm. The Thomayer's distance decreased by 5.5 cm. Expansion of the chest increased by 1.5 cm. The parameters improved more for the swimming patient compared to the patient on a traditional exercise programme.

Keywords: ankylosing spondylitis, swimming, backstroke